REMARKS

Claims 1-18 are pending in this application. Claims 6 and 12-15 are withdrawn from consideration. By this Amendment, claims 1-11 are amended and claims 16-18 are added.

In the Office Action, claims 6 and 12-15 were withdrawn as being directed to a non-elected species of the invention.

In the Office Action, the abstract was objected to. By this Amendment, a new abstract is provided. As a result, it is respectfully requested that the objection be withdrawn.

In the Office Action, guidelines were suggested for the preferred layout of the specification. By this Amendment, headings are added to the specification.

In the Office Action, the disclosure was objected to. By this Amendment, the specification is amended to remove references to specific claim numbers. As a result, it is respectfully requested that the objection be withdrawn.

In the Office Action, claim 11 was objected to. By this Amendment, claim 11 is amended to remove its multiple dependency. As a result, it is respectfully requested that the objection be withdrawn.

In the Office Action, claims 1-5 and 7-10 were rejected under 35 U.S.C. §112, first paragraph based on the assertion that the claims contain subject matter that is not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. The rejection is respectfully traversed.

Regarding claims 1, 9 and 10, it is respectfully submitted that one skilled in the art relevant to semiconductor wafer manufacturing and handling would have known, after reviewing this application, how a plurality of grippers can be moved together but actuated independently of one another using clutches, electric motors or individual cylinders. The present invention concerns equipment for a plant for the production of electronic components like computer chips. The

processes and devices for such plants are very sophisticated such that very highly educated people such as engineers and physicists with masters' degrees or PhDs develop the respective processes and devices. The daily job of these people is to develop and construct machines for the handling and processing of semiconductor wafers. They are very familiar with all kinds of wafer gripping and handling machines and mechanisms, including appropriate actuators. Further, the specification mentions cylinders as a type of actuator. It is respectfully submitted that any mechanical engineer of even limited experience or education, even more so an engineer skilled in the wafer-handling art, would know based on the disclosure of this Application how to move the grippers together but actuate them independently of one another.

Regarding claims 4 and 5, it is respectfully submitted that one skilled in the art of wafer production and handling would be sufficiently skilled in mechanical engineering and physics to know how to build a gripper that can grip a wafer. In Figure 5 there are shown two different end positions of a gripper, a lower end position and an upper end position. As explained on page 12, last paragraph, an empty gripper can be arranged in a lower end position and can be moved together with its gripping device parallel in the x-direction along the storage device. In this position, the holding elements (for example, holding element 49) have at least a small distance to the respective wafer. Further, in this position, the holding element 49 of the gripper is located underneath a horizontal line running through the center of the wafer. In order to grip a certain wafer, the gripper is moved in the x-direction to a position in which its pivoting arm 46 is aligned with the plane of the wafer. The gripper then starts to swivel in a counterclockwise direction to its other end position. By starting this swivel motion, the holding element comes into contact with the wafer. This contact is sufficient to lift the wafer by means of the holding element and to move it out of the storage device as a result of the continued pivoting movement and the already existing contact of the wafer with the holding element 49 and with the other two holding elements 50, 51.

The pivoting movement of the pivoting arm can lead to a contact between a stop and the holding element 50 and pushes the later in the direction of the wafer. A possible interconnection between the three holding elements, for example by means of a wire, can lead to a simultaneous movement, for example shifting of all three holding elements toward the wafer edge. Other was of

constructing passive actuation would also be know to one skilled in the art of wafer production and handling.

In view of the foregoing, it is respectfully submitted that one skilled in the art of wafer production and handling would have know how to practice the invention of claims 1-5 and 7-10 after reviewing this application and, therefore, respectfully request that the rejection be withdrawn.

In the Office Action, claims 1-5 and 7-10 were rejected under 35 U.S.C. §112, second paragraph based on various informalities. By this Amendment, claims 1, 8, 9 and 10 are amended to obviate the rejection. As a result, it is respectfully requested that the rejection be withdrawn.

In the Office Action, claims 1, 2 and 7-9 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 5,054,834 to Alessandri et al. The rejection is respectfully traversed.

Claim 1 includes the feature of a first one of the grippers being capable of gripping a first one of the wafers while the gripping device is in a first position and a second one of the grippers being capable of gripping a second one of the wafers while the gripping device is in a second position and the first gripper holds the first wafer.

In contrast, the device of Alessandri allows only the lowering or raising of all the single grippers at the same time because the grippers are mounted to a main body. As a result, the above described feature of claim 1 cannot be performed by Alessandri because the first wafer gripped would collide with wafers in the storage device when the gripping device moves from the first position to the second position. This collision would result because the grippers of Alessandri cannot move relative to each other.

Claim 9 includes the feature of grippers that move together but are actuated independently of one another relative to the wafers.

In contrast, as described above with regard to the rejection of claim 1, the grippers of Alessandri must move together as a unit and are not actuatable independently of one another relative to the wafers.

In light of the above, it is respectfully submitted that Alessandri does not disclose each and every feature of claims 1, 2 and 7-9 and, therefore, rejection under 35 U.S.C. §102(b) is inappropriate. As a result, it is respectfully requested that the rejection be withdrawn.

In the Office Action, claims 1-3 and 7-9 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 4,958,982 to Champet et al. The rejection is respectfully traversed.

Claim 1 includes the feature of a first one of the grippers being capable of gripping a first one of the wafers while the gripping device is in a first position and a second one of the grippers being capable of gripping a second one of the wafers while the gripping device is in a second position and the first gripper holds the first wafer.

In contrast, the device of Champet allows only the lowering or raising of all the single grippers at the same time because the grippers are mounted to a support plate. As a result, the above described feature of claim 1 cannot be performed by Champet because the first wafer gripped would collide with wafers in the storage device when the gripping device moves from the first position to the second position. This collision would result because the grippers of Champet all must raise and lower together.

Claim 9 includes the feature of grippers that move together but are actuated independently of one another relative to the wafers.

In contrast, as described above with regard to the rejection of claim 1, the grippers of Champet move together but are not actuatable independently of one another relative to the wafers.

In light of the above, it is respectfully submitted that Champet does not disclose each and every feature of claims 1, 2 and 7-9 and, therefore, rejection under 35 U.S.C. §102(b) is inappropriate. As a result, it is respectfully requested that the rejection be withdrawn.

In the Office Action, claims 4, 5 and 10 were rejected under 35 U.S.C. §103(a) over U.S. Patent No. 4,958,982 to Champet et al. The rejection is respectfully traversed.

Since Champet allows only the lowering or raising of all the single grippers at the same time because the grippers are mounted to a support plate, there is no suggestion by Champet to provide a first one of the grippers being capable of gripping a first one of the wafers while the gripping device is in a first position and a second one of the grippers being capable of gripping a second one of the wafers while the gripping device is in a second position and the first gripper holds the first wafer. As a result, Champet does not suggest the features of claim 1. Since claims 4, 5 and 10 depend from claim 1, it is respectfully submitted that Champet does not suggest the features of claims 4, 5 and 10 and, therefore, rejection under 35 U.S.C. §103(a) is inappropriate. As a result, it is respectfully requested that the rejection be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

By _____

Stuart I. Smith
Registration No.: 42,159
VENABLE LLP
P.O. Box 34385
Washington, DC 20043-9998
(202) 344-4000
(202) 344-8300 (Fax)
Attorney/Agent For Applicant

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